## **ARGUMENTS/REMARKS:**

Applicants appreciate the allowance of Claims 3 and 4.

## Claim Rejections - 35 USC §103(a)

Claims 7, 9, 10, and 12 are rejected under 35 USC §103(a) as being unpatentable over U.S. Pat. No. 6,718,234 to Demoro et al.

Claim 5 is rejected under 35 USC §103(a) as being unpatentable over to Demoro et al. in view of U.S. Pat. No. 6,243,696 to Keeler et al. Applicants respectfully traverse these rejections.

Applicants' invention (as set forth in the amended claims) is not anticipated by or made obvious by the teachings in the cited prior art because neither teach or suggest Applicants' method of controlling a reactor using heat and mass balance along with catalyst kinetics, particle physics (settling rate), and other phenomena inside the settling legs of the loop reactor to predict and calculate a variety of information including but not limited to the composition of the inlet and outlet streams.

Further, there is no suggestion or motivation in the prior art references to modify the teachings or to combine the teachings in order to make Applicant's invention. Moreover, the basis for any such combination under 35 U.S.C. § 103 must be found in the prior art references themselves and not in Applicants' disclosure. Thus, no prima facie case under 35 U.S.C. 103(a) has been made.

There is support in the specification for all the newly added claims. For example, there is support at Par. [0046] for newly added Claims 17-20, and at Par. [0047] (Published Application) for newly added Claims 15-16.

Having addressed all issues set out in the Office Action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request the same.

Dated June 10, 2006

Respectfully subjinitted

Shirley A. Kopecky

Registration No. 48,460

FINA TECHNOLOGY, INC.

P.O. Box 974412

Houston, Texas, 77267 Telephone: 713-483-5386 Facsimile: 713-483-5383 Attorney for Applicant(s)